



The Scary Side of Ballooning

It's fitting that the thirteenth chapter of this book discuss the dangers of hot air ballooning. Fortunately, there are only a few. Modern engineering, fabrics, burners and fuel systems have made hot air ballooning one of the safest of the flying sports. FAA certified repair stations make all but the most minor repairs, and each balloon is inspected at least once a year for safety and conformance to a rigid set of specifications. The modern-day training of pilots has also made a great deal of difference. Today's balloon pilots are well trained and well equipped and their safety record shows it.

There are only three major dangers in ballooning and only one that really strikes fear into the heart of every balloonist. This is hitting a power line. Fortunately power line accidents are rare due to careful training and safety precautions. Conscientious balloonists never launch a balloon upwind from a set of power lines unless they are sure there is a wide margin of safety in clearing the lines. Once up in the air there are few problems because the normal flight pattern carries the balloon high above any danger.

Landing is another story. Power lines often can't be seen from above because the wires blend in with the ground cover. Instead, we watch for anything that looks even vaguely like power poles and always assume there are wires in between the poles and fly well above them. When landing, we try to pick large open areas without any obstructions. A prime concern in choosing the approach path is any power lines in the area. The

chase crew helps by looking over the proposed landing site and informing the pilot of any hazards. The safety precautions pay off, because thousands of safe balloon flights are made each year. Most balloonists will never hit a power line in a lifetime of flying.

Occasionally a story will hit the newspapers of a balloon hitting a power line and lives being lost. In almost all of the cases, the balloon was flying lower than the power line and the pilot tried to ascend and clear the power lines. The effort failed and the gondola was dragged up into the lines. For this reason, emergency training for avoiding power line collisions emphasizes landing the balloon before you hit the wires or at least trying to be sure that the balloon is descending so the gondola goes under the wires. George constantly impressed on me that, if necessary, I must be willing to deflate the balloon from fifty to sixty feet up in order to try to get to the ground before hitting the lines. You might break a leg doing this, but it's still a lot less dangerous than having the gondola dragged up into 50,000 volts of electricity.

The second major danger to ballooning is something called a thermal. Basically, this is a severe updraft caused by uneven heating of the ground. These are often seen as dust devils or whirlwinds during the hot days of summer. Along with every updraft there is a downdraft someplace. The two make for a mean combination that balloonists try to avoid. They occur only after the sun has been up long enough to heat the air next to the ground. This is one of the reasons ballooning is usually done in the early morning hours just after dawn. The air is cooler and more stable and usually the flight is over before thermal activity starts.

Occasionally, you get fooled. One morning I had launched, along with several other balloons, from the desert west of Albuquerque. It was August, so we had taken off shortly after dawn and had been flying for only an hour. We could usually depend on at least an hour and a half before expecting any thermal activity. We were floating in a westerly direction about 2000 feet above the ground when the balloon suddenly shook and the wind changed direction. The balloon rotated one full turn as if a giant hand had grabbed it and then settled down.

"What was that?" John asked wide-eyed. John was our banker and had been on our chase crew awhile. He had come out one morning just to see what his bank was financing and had become hooked on ballooning.

"I don't know, but I don't like it," I said looking quickly around at the desert below. Let's drop down and see what's going on next to the ground. John, watch the other balloons and tell me if any of them start doing things that look unusual."

"Like what?" he asked. His shaky voice said that he didn't like it any more than I did.

"Any balloon that's dragging, or seems to be twisting, or landing hard. Also keep an eye out for any dust devils or even any dust blowing on the ground."

I checked around the horizon. Several other balloons were close to the ground and a couple had landed. None of them appeared to be having any wind problems. The other balloons flying at our altitude all appeared peaceful and calm. Still, I felt uneasy. We descended rapidly to about fifty feet above the ground and picked up a wind layer that was moving west across a large open area towards the main road. The ride was smooth and comfortable. I looked carefully around again, but everything appeared calm.

"I think everything's OK," I said. "I guess I was bein' too ouchy. We'll land on the main road and change passengers."

A pink and red balloon named Pink Lady had descended with us and was flying about 200 yards ahead. We watched as it drifted in for a landing. Just as it touched the ground a gust of wind swirled up from the desert floor. The envelope twisted as the wind grabbed it; then the sides squeezed in and the balloon popped up like a cork to about 100 feet.

"He's in a thermal!" I hollered.

We could see the grass and bushes blowing from where we were. The entire balloon swirled around a couple of times and then plunged towards the ground like a huge fist was pushing on the top. It hit the ground solidly and the gondola momentarily disappeared as the envelope and skirt telescoped over it. The pilot held his cool and pulled the deflation panel. This time, the balloon stayed on the ground.

I told John to hang on and looked for the nearest acceptable place to land. At this point, anything could happen. If the thermal came our way we could be suddenly pulled up in the air or

pushed rapidly toward the ground. I spotted a small clearing and as Sundancer touched down, we could feel the pull of the ground wind headed into the updraft of the thermal, the balloon dragged a little, and then the air became calm. We were a good distance away from where the other balloon had landed, and I couldn't see anything to indicate the thermal was still there or headed our way. The chase crew rushed up and grabbed the gondola.

"Did you see that?" Judy panted.

"You bet! Pink Lady hit a thermal, but it seems to be gone now."

"Shall we take it down?" Kevin asked.

I looked around. Things were happening all over. A small dust devil swirled about a mile away. Another balloon about a mile away in a different direction was on the ground, but leaned far over as the pilot fought the wind. Even though it was quiet where we were, it was obvious we didn't want to fly in any more of that stuff.

"Yeah, let's go," I called and tossed the crown line to Kevin. I didn't want to rush too fast, but I darn sure wanted the hot air out of that envelope. Until we had the balloon down there was always the danger an updraft could get enough grip on the envelope to yank us up in the air like Pink Lady. I watched tensely until the fabric was all down on the ground and then looked around. The other balloons were all either on the ground or hunting a place to land. Within fifteen minutes the sky was empty. We learned later that two more of them had been caught in light thermals on the way down.

The third danger in ballooning is a high wind landing. Every balloon pilot who flies very much has been through several of these. It is a hazard that is accepted as part of the sport and it's usually far less dangerous to the passengers than to the balloon. This doesn't mean it is ignored. There are many days we don't fly because the weather just doesn't feel right. There are a lot of days we cut the flying short because the winds appear to be picking up. There is a saying that it is a lot better to be sitting on the ground wishing you were flying, than to be up in the air sailing along at twenty-five miles per hour and wishing you were on the ground.

My first high wind landing occurred while I was still a student. George had taken a vacation and I had arranged for

some flight time with another instructor pilot named Bill. The take off had gone well and we had spent quite a bit of time practicing low level flying in a series of arroyos in a broad valley below a mesa west of Albuquerque. We were headed back toward the mesa and I figured on landing in a flat area that I knew was just over the rim. As we ascended to clear the edge of the mesa the balloon started to pick up speed. The higher we ascended, the faster the balloon moved. By the time we were high enough to clear the rim we were traveling at about fifteen to twenty miles per hour. That may not sound very fast, but sooner or later we were going to have to hit the ground at that speed and there was nothing between us and all the rocks, cactus, brush and trees but a wicker basket.

"What do you think?" I asked as the ground seemed to move by faster and faster.

"Try taking it up a little higher," Bill advised. "Sometimes the wind will slow up a little once we're back further over the mesa."

We ascended to about fifty feet above the ground and rode along for about a mile. The roads ran for about five miles ahead in the direction we were going. At the rate we were traveling, we would be over a large roadless area in less than twenty minutes.

"I don't see any difference. Do you?" I asked nervously.

"Nope," Bill answered. He seemed to be actually enjoying the ride. Maybe he was related to George!

"Well, I think I'm goin' to try to find a place to land," I said and racked my brain to remember all the things I had read about high wind landings.

The high wind landing procedure for my make and model of balloon was to find the largest open place we could, level out at about three to five feet above the ground, and pull the parachute deflation top wide open. When the gondola hit the ground we both wanted to be braced with our feet against the side that would drag. Theoretically, the gondola would tip over onto this side and we could both slide down into the basket and the wicker sides of the gondola would give us some protection.

The best landing site I could spot was an area filled with low bushes about half a mile ahead. I leveled out about three

feet above the ground and waited as the proposed landing area rushed toward us. Everything seemed to be happening awfully fast. My mouth was dry and the bushes coming up seemed to grow several times their normal size. For some reason rocks started appearing that shouldn't have been there.

"Any sign of the chase crew?" I managed to squeeze out between clenched teeth.

Bill glanced over his shoulder. "I think I can see them about a mile back."

"Well, if we are going to do it, let's do it," and I hauled on the ripline. The gondola hit and I could see the envelope sliding toward the ground and feel the basket tip over. The ripline strained at my arms, trying to pull me out of the gondola, but I hung on doggedly. I had to keep the top open. If I didn't, the envelope would act like a huge sail and the wind would continue to drag us across the mesa. Everything depended on getting the hot air out of the envelope as fast as possible. By now, I was sitting down inside the gondola with my behind on the wicker side of the basket, my back against the bottom of the gondola, and my feet braced against the panels on the upper edge of the gondola. I couldn't remember getting there. I could feel the ground sliding underneath me and wondered if cactus spines would penetrate the wicker. I was pretty sure they would. Dust billowed around us and Bill coughed. Then I realized it was quiet and all motion had stopped. Blue sky appeared between the upper edge of the overturned gondola and the waving fabric of the deflating envelope.

"Nice job," I heard a voice say and I looked over to see Bill sitting next to me with a big grin on his face. We must have looked like two dusty gophers in a hole. We crawled out and looked over the envelope. There was no damage that I could see. From the drag marks the gondola made, it appeared we had slid almost 100 feet. I couldn't believe it. Everything had gone just like it was supposed to.

"How many of those have you done?" Bill asked as we looked around for the chase crew.

"That was my first. See how my hands are shaking?" I said and held out a hand.

Bill's head jerked around. "Oh! My God! If I'd known that, I would've been scared. I thought you knew what you were doing."

At times I think it is amazing that, in a sport where you are entirely at the mercy of the elements, there are so few serious accidents. I feel that a lot of the good safety record is due to good pilot judgment. Good balloon pilots carefully pick the right times and the right places to fly. We get up many mornings and look out the window or check with the flight service and go back to bed. There are just too many good days to fly to risk getting hurt by going up on a marginal day. Before we ever fly from a new site, we carefully study maps of the surrounding area and, if possible, talk with other balloonists who are familiar with the area. In ballooning, "Safety First" is not just two words on a sign post. It is a way of life.